

CLAIMS:

1. (Currently amended) A method of treating a subterranean zone comprising the steps of: (a) preparing or providing a treating fluid comprising water containing divalent metal ions, a gelling agent, a borate crosslinking agent, and an environmentally benign sequestering agent for sequestering divalent metal ions, wherein said environmentally benign sequestering agent is derived from naturally occurring amino acids linked together in polymeric form; and (b) introducing said treating fluid into said subterranean zone.
2. (Original) The method of claim 1 wherein said water is selected from the group consisting of seawater, brine and hard water.
3. (Currently amended) The method of claim 1 wherein said gelling agent is selected from the group consisting of guar, hydroxypropylguar, carboxymethylhydroxypropylguar, carboxymethylguar, hydroxyethylcellulose, hydroxyethylcellulose grafted with glycidol or vinyl phosphonic acid, carboxymethylcellulose, carboxymethylhydroxyethylcellulose, xanthan, and succinoglycon ~~and the like~~.
4. (Original) The method of claim 1 wherein said gelling agent is hydroxypropylguar.
5. (Original) The method of claim 1 wherein said gelling agent is present in said treating fluid in an amount in the range of from about 0.1% to about 5% by weight of said water therein.
6. (Original) The method of claim 1 wherein said borate crosslinking agent is selected from the group consisting of boric acid, disodium octaborate tetrahydrate, sodium diborate and pentaborates.
7. (Original) The method of claim 1 wherein said borate crosslinking agent is boric acid.
8. (Original) The method of claim 1 wherein said borate crosslinking agent is present in said treating fluid in an amount in the range of from about 0.0025% to about 0.1% by weight of said water therein.

9. (Currently Amended) The method of claim 1 wherein said environmentally benign sequestering agent is selected from the group consisting of polysuccinimide, polyaspartic acid, and polymers, oligomers, chains or block-copolymers of the twenty two essential amino acids containing metal complexing groups such as selected from the group consisting of carboxylic acids, phosphonic acids, sulfonic acids and boronic acids.
10. (Currently Amended) The method of claim 1 wherein said environmentally benign sequestering agent is ~~polyaspartate~~ polyaspartic acid.
11. (Original) The method of claim 1 wherein said environmentally benign sequestering agent is polysuccinimide, and said treating fluid comprises the necessary alkalinity to cause hydrolysis of said polysuccinimide to form polyaspartate within a desired time.
12. (Original) The method of claim 1 wherein said environmentally benign sequestering agent is present in said treating fluid in an amount in the range of from about 1% to about 40% by weight of said water therein.
13. (Currently Amended) A method of forming one or more fractures in a subterranean zone penetrated by a well bore comprising the steps of: (a) preparing or providing a fracturing fluid comprising water containing divalent metal ions, a gelling agent, a borate crosslinking agent and an environmentally benign sequestering agent for sequestering divalent metal ions, wherein said environmentally benign sequestering agent is derived from naturally occurring amino acids linked together in polymeric form; and (b) introducing said fracturing fluid into said subterranean zone by way of said well bore at a rate and pressure sufficient to create one or more fractures therein.
14. (Original) The method of claim 12 wherein said water is selected from the group consisting of seawater, brine and hard water.
15. (Currently amended) The method of claim 12 wherein said gelling agent is selected from the group consisting of guar, hydroxypropylguar, carboxymethylhydroxypropylguar, carboxymethylguar, hydroxyethylcellulose, hydroxyethylcellulose grafted with glycidol or vinyl phosphonic acid, carboxymethylcellulose, carboxymethylhydroxyethylcellulose, xanthan, and succinoglycon ~~and the like~~.

16. (Original) The method of claim 12 wherein said gelling agent is hydroxypropylguar.
17. (Original) The method of claim 12 wherein said gelling agent is present in said fracturing fluid in an amount in the range of from about 0.1% to about 5% by weight of said water therein.
18. (Original) The method of claim 12 wherein said borate crosslinking agent is selected from the group consisting of boric acid, disodium octaborate tetrahydrate, sodium diborate and pentaborates.
19. (Original) The method of claim 12 wherein said borate crosslinking agent is boric acid.
20. (Original) The method of claim 12 wherein said borate crosslinking agent is present in said fracturing fluid in an amount in the range of from about 0.0025% to about 0.1% by weight of said water therein.
21. (Currently amended) The method of claim 12 wherein said environmentally benign sequestering agent is selected from the group consisting of polysuccinimide, polyaspartic acid, and polymers, oligomers, chains or block-copolymers of the twenty two essential amino acids containing metal complexing groups ~~such as~~ selected from the group consisting of carboxylic acids, phosphonic acids, sulfonic acids and boronic acids.
22. (Original) The method of claim 12 wherein said environmentally benign sequestering agent is polyaspartic acid.
23. (Original) The method of claim 12 wherein said environmentally benign sequestering agent is polysuccinimide, and said fracturing fluid comprises the necessary alkalinity to cause hydrolysis of said polysuccinimide to form polyaspartate within a desired time.
24. (Original) The method of claim 12 wherein said environmentally benign sequestering agent is present in said fracturing fluid in an amount in the range of from about 1% to about 40% by weight of said water therein.

25. (Original) The method of claim 12 wherein said fracturing fluid further comprises proppant particles.

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37. (Cancel)

1 38. (New) A method of treating a subterranean zone comprising the steps of:
2 (a) preparing or providing a treating fluid comprising water containing divalent metal ions, a
3 gelling agent, a borate crosslinking agent, and an environmentally benign sequestering agent
4 for sequestering divalent metal ions; and (b) introducing said treating fluid into said
5 subterranean zone, wherein said environmentally benign sequestering agent is selected from
6 the group consisting of polysuccinimide, polyaspartic acid, and polymers, oligomers, chains
7 or block-copolymers of the twenty two essential amino acids containing metal complexing
8 groups such as selected from the group consisting of carboxylic acids, phosphonic acids,
9 sulfonic acids and boronic acids.

1 39. (New) A method of treating a subterranean zone comprising the steps of:
2 (a) preparing or providing a treating fluid comprising water containing divalent metal ions, a
3 gelling agent, a borate crosslinking agent, and polyaspartic acid; and (b) introducing said
4 treating fluid into said subterranean zone.

1 40. (New) A method of treating a subterranean zone comprising the steps of:
2 (a) preparing or providing a treating fluid comprising water containing divalent metal ions, a
3 gelling agent, a borate crosslinking agent, and polysuccinimide; and (b) introducing said
4 treating fluid into said subterranean zone.

1 41. (New) A method of forming one or more fractures in a subterranean zone

2 penetrated by a well bore comprising the steps of: (a) preparing or providing a fracturing
3 fluid comprising water containing divalent metal ions, a gelling agent, a borate crosslinking
4 agent and polyaspartic acid; and (b) introducing said fracturing fluid into said subterranean
5 zone by way of said well bore at a rate and pressure sufficient to create one or more fractures
6 therein.

1 42. (New) A method of forming one or more fractures in a subterranean zone
2 penetrated by a well bore comprising the steps of: (a) preparing or providing a fracturing
3 fluid comprising water containing divalent metal ions, a gelling agent, a borate crosslinking
4 agent and polysuccinimide; and (b) introducing said fracturing fluid into said subterranean
5 zone by way of said well bore at a rate and pressure sufficient to create one or more fractures
6 therein.